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DEPARTMENT OF BIOCHEMISTRY
STANFORD UNIVERSITY SCHOOL OF MEDICINE

Area Code 415
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July 14, 1970

Dear Arthur,

I was surprised when I heard from Mary that you were thinking about the possibility of coming back earlier. I thought you were looking forward eagerly to staying in England until September. You know we would love to have you back whenever you come, but why not take advantage of this chance while you still have it.

Tom called me the other day because he wanted to talk about the work he is doing. I suspect he has kept you up to date, but I was really quite taken by the progress he has made. I think the crucial point of what he has found is that starting with the Cairns' mutant, he can isolate a DNA dependent, DNA polymerase. It requires all four triphosphates, but is not neutralized or affected in any way by the anti-"Kornberg" polymerase. Tom was asking for suggestions as to what he could do to differentiate it from the well known polymerase activity. It seems to me quite possible that he has learned how to extract the classical polymerase from the Cairns' mutant in such a way as to preserve its activity. He told me that when he uses standard extraction procedures on the Cairns' mutant, he finds no polymerase activities in the extract. His activity is found only when he breaks open the cells by his technique (pressure disruption). He has never used his extraction method on the wild-type to see whether he can detect both the classical polymerase and the activity he has studied. I suggested that he do that and, in fact, to try to show that there are two polymerases--one neutralizable by the anti serum, and the other which is not. He can also use simple separation procedures to determine if he can detect two types of DNA polymerase activities. He will probably call again and I'll try and keep up with his story as best I can. Tom said that Malcolm Gefter is quite eager not to get scooped on this and so he is working very hard and will probably stay on in New York longer than he had originally planned. Bob Lehman tells me that Jerry has also found this activity (or one like it) and has purified it extensively. If Tom publishes this, that will surely give the editors of Nature a headache. They won't know which Kornberg is doing what!

Bob Schimke has finally decided to become Head of the Department of Pharmacology. I hope that this settled the situation finally. I wish him lots of luck but he will need even more than that to solve the problems that have developed in that department. In any case, I think we can begin to move ahead now in our thinking about new appointments and I hope that by the fall, after you have gotten back, we can make some definite decisions.

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We had a meeting of several hours yesterday in which we reviewed each of the graduate students' progress during the past year. I think we are losing the only problem children we have and all of us were quite happy with the progress shown by the students who have come in the last few years. There was unanimous feeling that Doug Brutlag is sensational. We had a long discussion about the question of how long students should stay here and how we could speed up their time in the department and we came to several decisions. Starting with the incoming class, we will inform them that we expect the normal tenure of a graduate student to be four years and that they will not get any financial support past that point. That feeling will also certainly be made clear to the students that are here now and I think we are all determined to get our guys out as soon as possible. Lingerin students create problems for us and I don't think it does them any good either. We are also instituting a requirement that all students must submit a final version of their thesis which is acceptable to their committee before their oral exam. This should prevent any case where a student feels that the pressure is off after he has taken his oral and then he has a relaxed interval in which to write his thesis. Tom Link has been at the writing phase of it for nearly seven months and now we have to try and sweat out Larry's thesis now that he has left. I don't aim to allow that to happen ever again.

We also discussed at some length the biochemistry course for the coming year. As you know, I felt very bad (because I knew Bob would agree whether he wanted to or not) about asking Bob Lehman to help us out by coming back in the fall to give at least some of the carbohydrate lectures. As expected, he said he would if we could arrange it so that he would not be away from home during the Jewish holidays. As it turned out, both of the holidays came smack in the middle of his lecture set. To get around that, we have decided to have the protein lectures introduce the course and both Eric and Buzz have agreed to give their lectures first. We are hoping that following a brief introduction of protein structure, Eric can talk about hemoglobin and illustrate how changes in protein structure can have profound effects on the activity of that protein. Perhaps by starting with something which is familiar and of immediate concern to their medical inclinations (and I believe to the interests of graduate students as well), we can make the study of protein structure as the first item of business a more acceptable step. Bob will then follow with his set of 10 lectures on carbohydrates. I had volunteered our services to do the last four (that is the ones on regulation of carbohydrate metabolism and on glycogen storage synthetase), but Bob felt that since he was going to be here anyway, the additional four lectures would be no difficulty. We are trying to line up the remainder of the schedule and should have that in final form by the time you arrive. You had suggested several lectures on nutritional themes. Do you have any suggestions of people who could do a good job in that area?

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By now, I guess, Arnold Burgen is back in Cambridge and he can tell you about his stay here. What little we did see of him was most enjoyable and I am sure his lab must be an active one.

I am not privy to much of the discussions going on about a replacement for Pitzer but I gather that Lyman is still the leading candidate. As you know, he has been made acting president and I can only hope that if he is to become the president, they decide that quickly and before the school year starts. Pitzer has essentially divorced himself from the Dean's Search Committee. As a consequence, Lyman will have to become involved, but in his current status, it is not clear how much negotiating he can do with any candidate we recommend. We are prepared to invite Bob Cook back for a second serious visit and during that time, he will have to have access to some official who speaks for the University and is in a position to negotiate with him. I believe we have an agreement from the trustees that this phase of the search should go ahead and that they are prepared to back an appointment of dean even if the president has not yet been designated. But, would Cook be willing to make a decision without knowing who the president would be?

Bill Folk is in the process of trying to collect a thesis reading committee. I hope that you would be willing to serve on that as well as on the oral examining committee. These will come up some time in late September or October. I thought you would be interested, but equally important, I think you would be a good influence in both capacities.

I hope that Sylvy is enjoying the stay in Cambridge. It seems such a marvelous place when there are no other pressing activities going on. I am afraid my selection of a dress for Millie at Donald Davies (I also bought her a shirt at the Donald Davies store in London) was not a big hit--we have returned them both. I don't suspect that there will be any difficulty in getting a refund.

That's all for now. I will write to you again when there is more news to send.

Best regards,

A handwritten signature in cursive script that reads "Paul".

Paul Berg

PB/i